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(71)Applicant : MURATA MFG CO LTD

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(54) PIEZOELECTRIC PORCELAIN

(57)Abstract:

PURPOSE: To produce a piezoelectric porcelain for filters, having a high electromechanical coupling factor, excellent in temperature characteristics of resonance frequency and capable of dealing with a wide band.

CONSTITUTION: This piezoelectric porcelain is obtained by replacing  $\geq 0.5$  to  $< 5$  mol% Pb atoms in lead zirconate titanate represented by the general formula  $a\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - $b\text{PbTiO}_3$ - $c\text{PbZrO}_3$  [a, b and c are each  $1 \leq a \leq 10$ ;  $42 \leq b \leq 60$ ;  $30 \leq c \leq 57$ , with the proviso that a, b and c are each mol% and (a+b+c) is 100] with Mg and further adding and including  $\geq 0.1$  to  $\leq 1$  wt.% Cr expressed in terms of  $\text{Cr}_2\text{O}_3$  therein.

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